

# Advanced Color Correction in Media Composer

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JGreenberg Consulting

JGreenberg Consulting

# Session Overview

- **Starts with basics/foundation (fast)**
- **Color theory/avid controls**
- **Room setup**
- **Scopes**
- **Controls**
- **Autocorrect**
- **Shot matching**
- **Secondaries**

# Survey

- **Who has MC 6?**
- **Going to buy Symphony?**
- **Knows how the parade scope works?**



# Housekeeping

## HOUSEKEEPING

- **Ask anything you want!**
- **URL of Notes @ J Greenberg Consulting.com**
- **my email @ end**



# Cool Tip

**Add a track up high for  
titles graphics and  
more**

# Color Theory



# Spanish Castle Illusion















# Goals of Color Correction

- **Expand Dynamic Range**
- **Neutralize Color Cast**
- **Shot to Shot Matching**
- **“Looks”**



# Color Space

# RGB

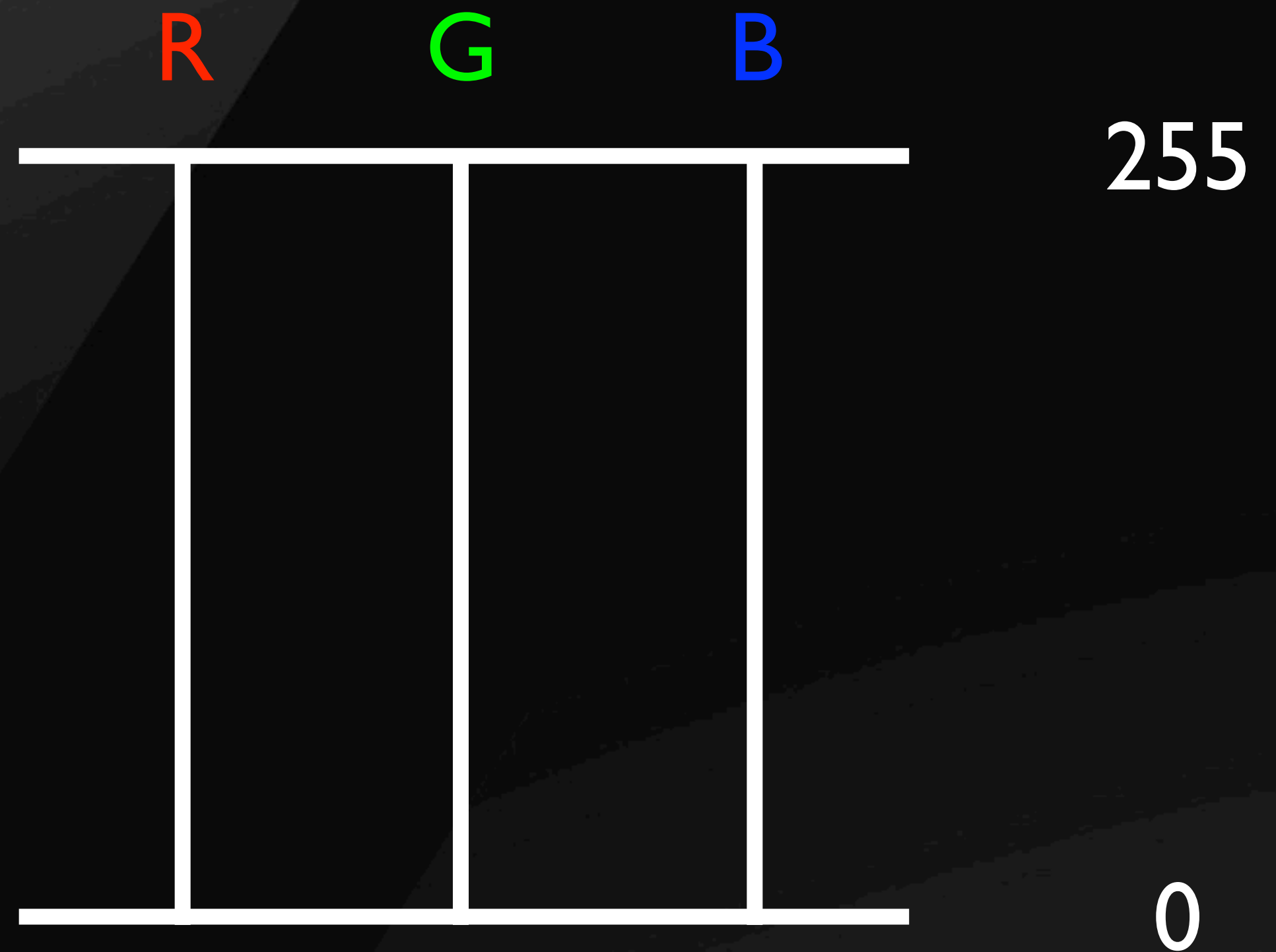
- **Computer ‘mostly’ work in RGB**
- **What’s the value for White?**
- **Black?**

R G B



# RGB

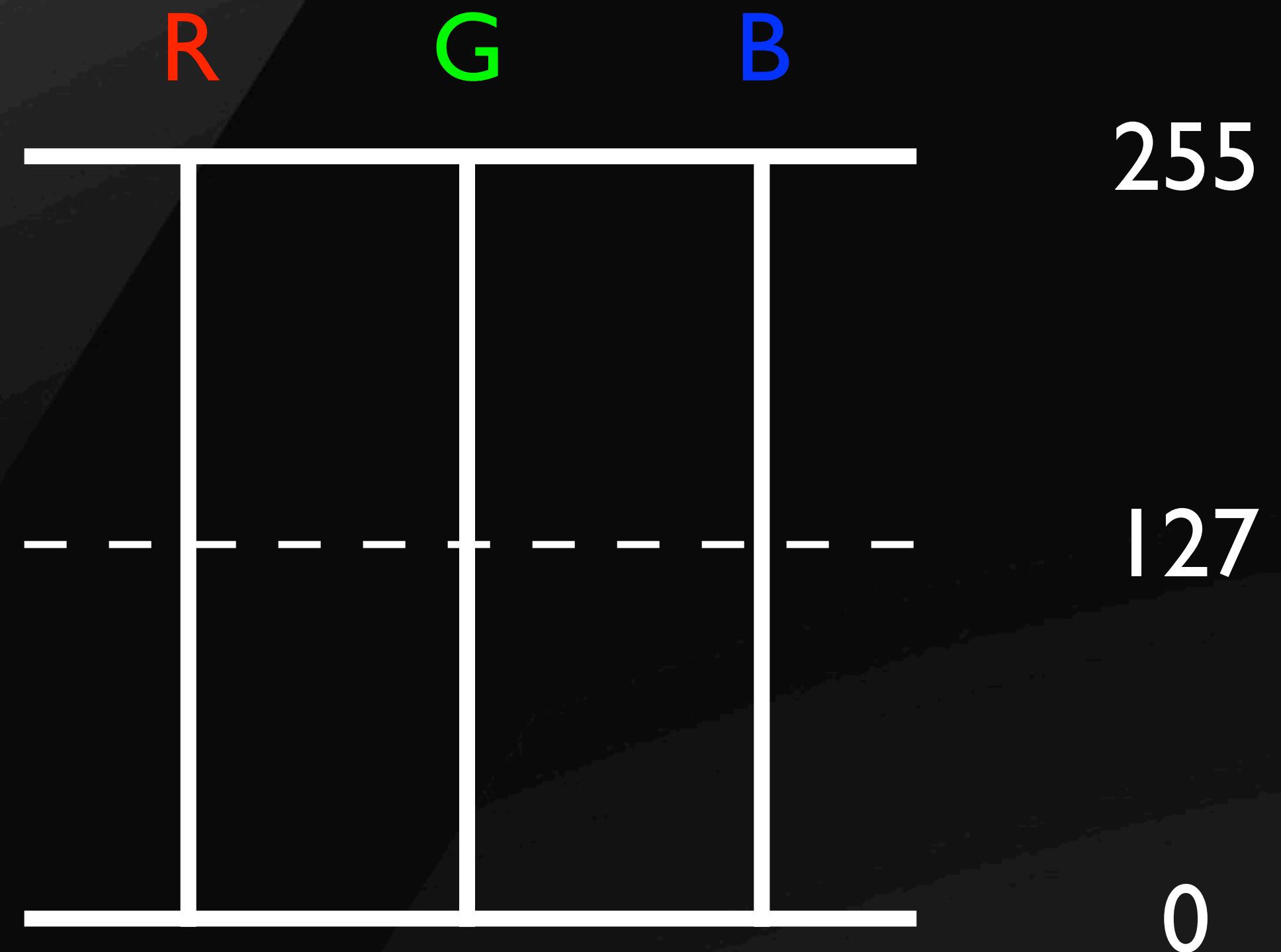
- **Color values**
- **0,0,0 black**
- **255,255,255 white**
- **What's grey?**





# RGB

- All three the same = Grey (between 0(black) + 255 (white))
- Dynamic range is the 'darkest' to the lightest value



**Expanding the dynamic  
range means (often)  
maximizing the brightest  
to darkets moments**

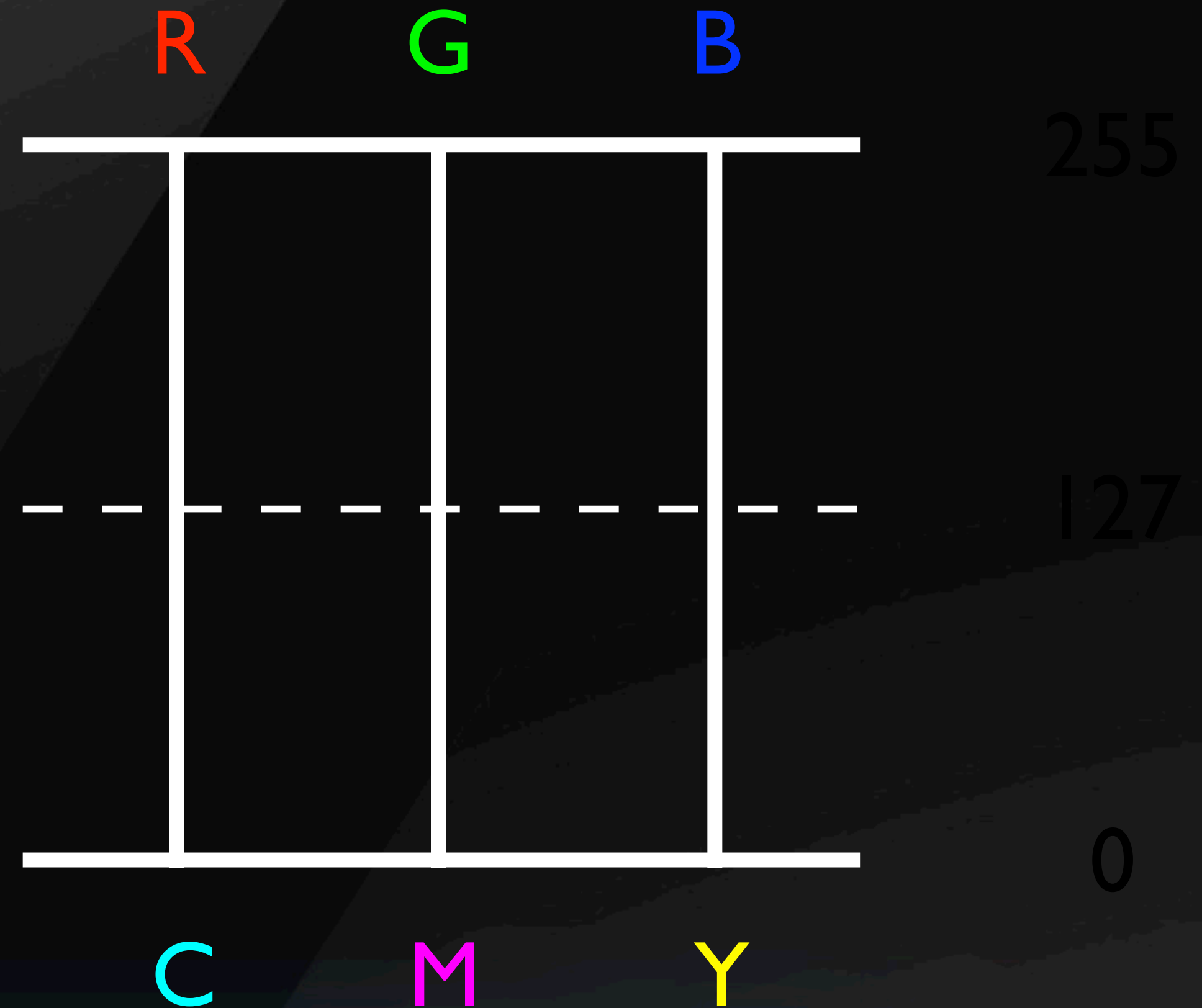
# Goals of Color Correction

- **Expand Dynamic Range**
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- **Shot to Shot Matching**
- **“Looks”**

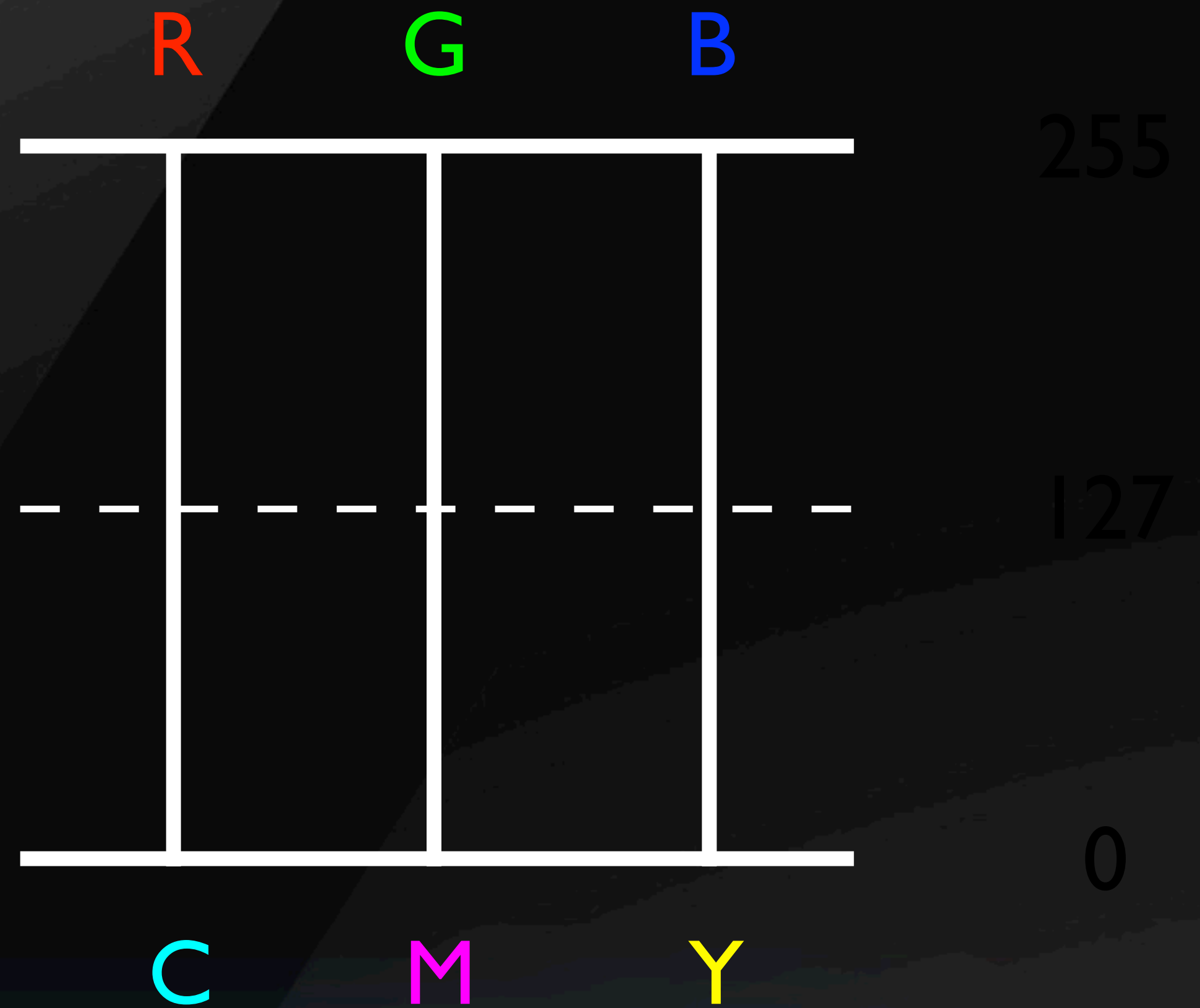


# CMYK

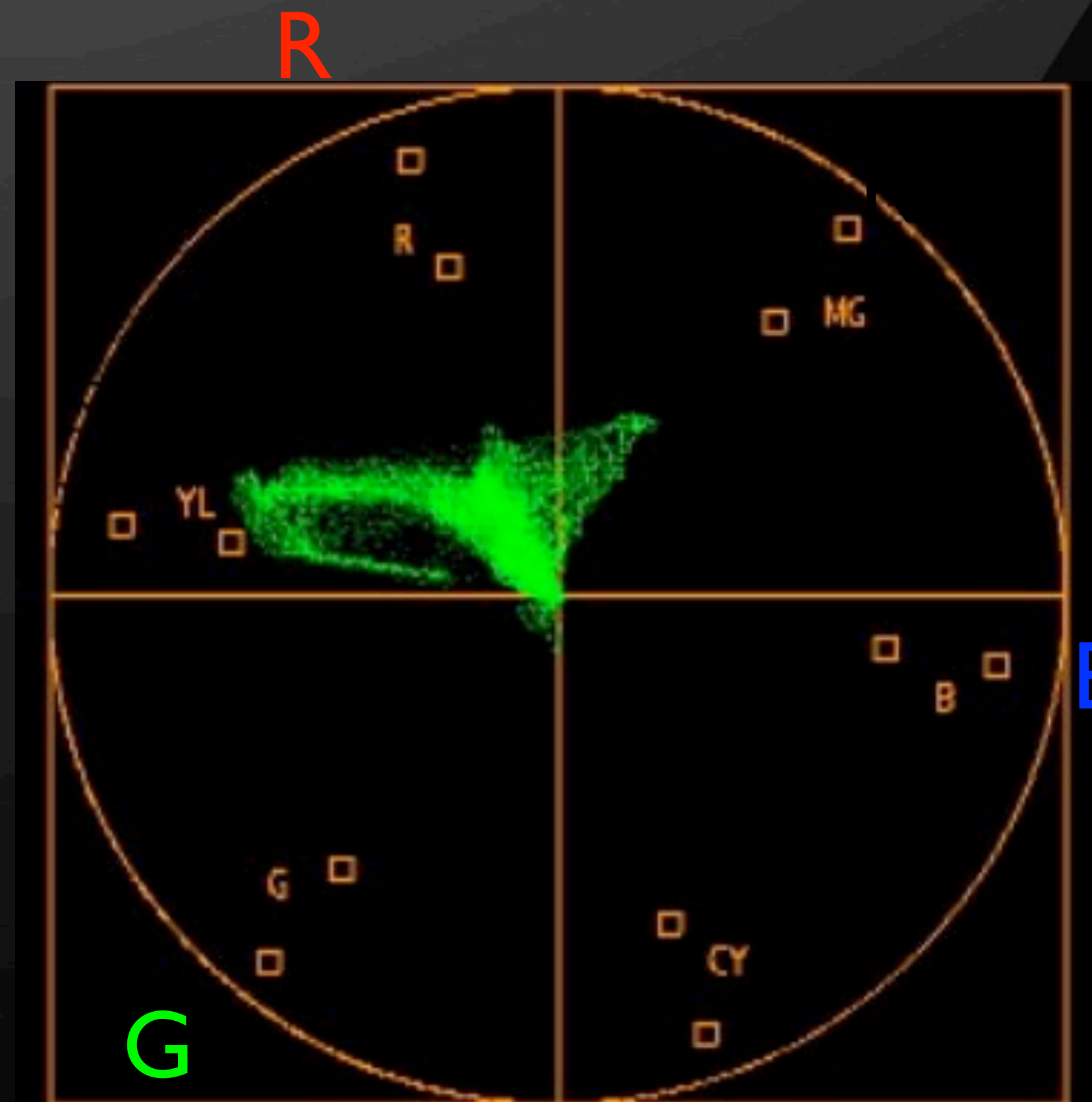
- **Print**
- **Opposite of RGB**
- **Subtractive space**
- **nothing to do with video...but....**



# RGB



# RGB



G

B

255

127

0

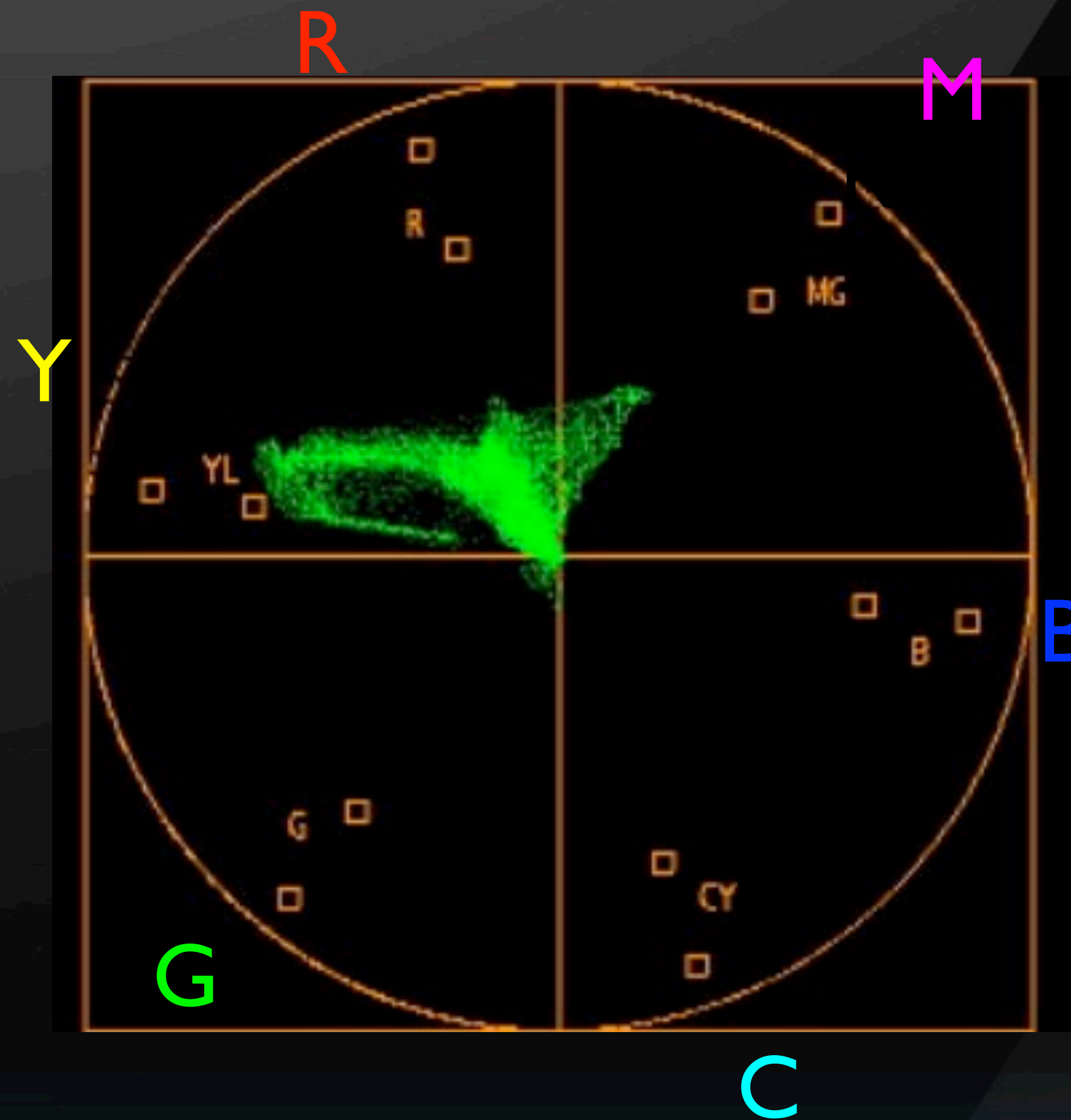
C

M

Y



# RGB



G

B

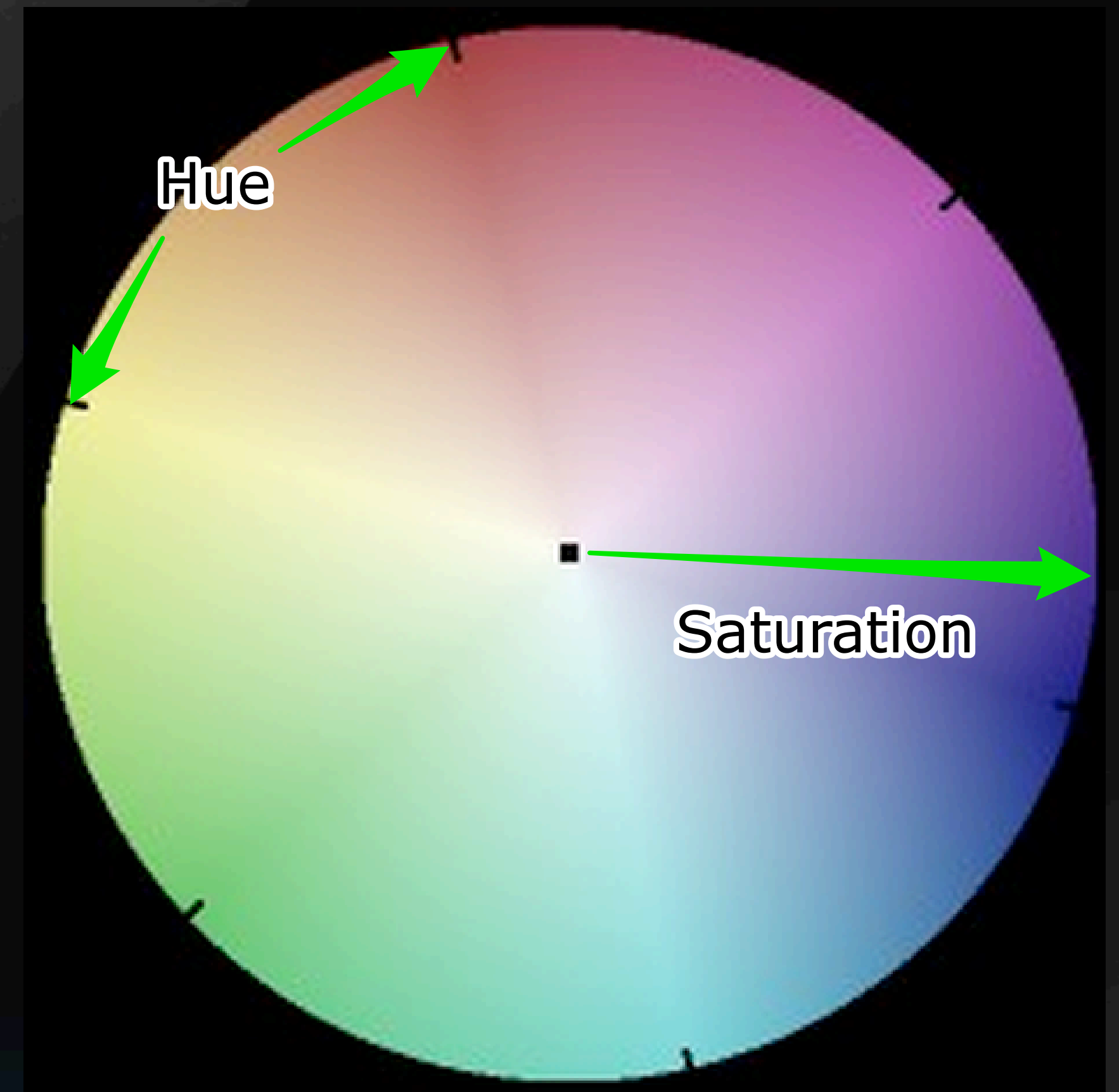
255

127

0

# Understanding Color

- **Hue - What angle?**
- **Saturation**
- **Brightness is separate**



# **Neutralizing color casts**

**Grey/white items shouldn't  
have a color cast  
mix opposite color**



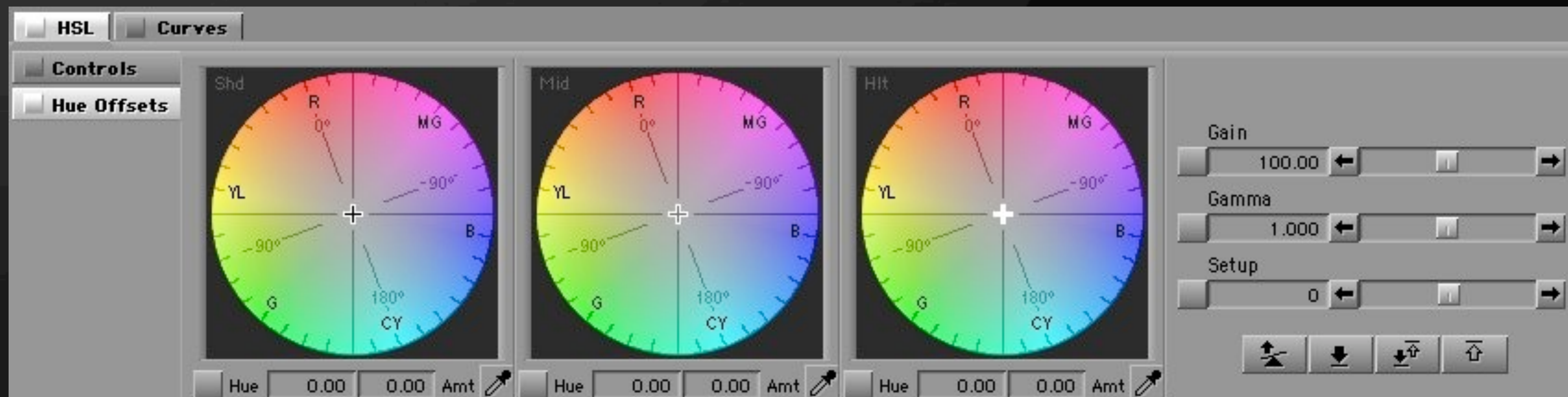
# Video is not RGB

- **Y Cr' Cb'**
- **Luma + Chroma**
- **Brightness + Color**

# Avid Controls

# Two Sets of Controls

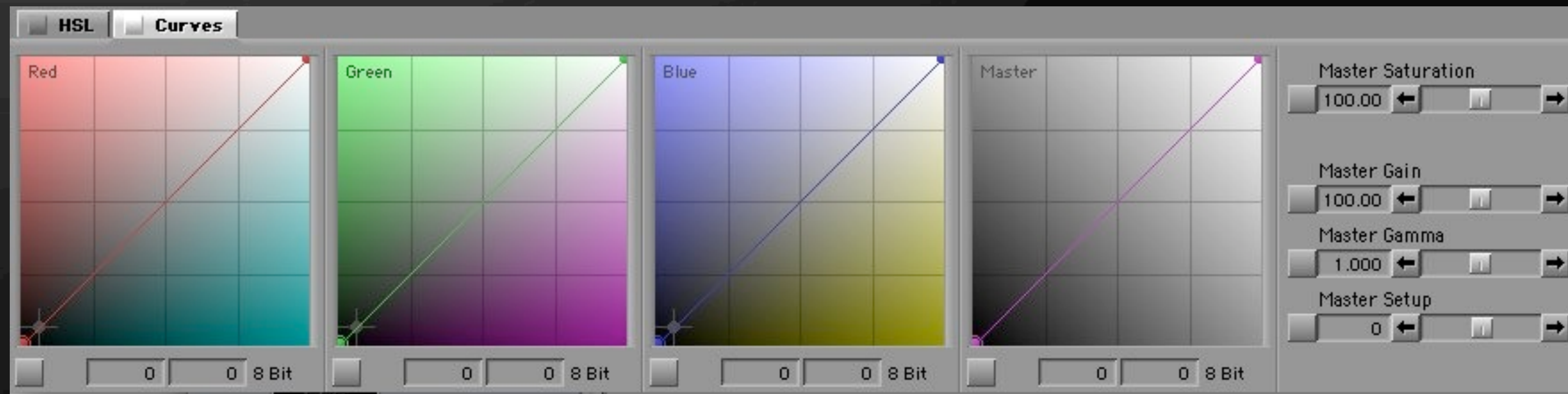
HSL - The way video is stored





# Two Sets of Controls

RGB - the way computers think



# Eyedropper

- **One of the two uses**
- **Click and drag**
- **Measure RGB**
- **A neutral item ought to be identical RGB**

# Room Setup



# **If you can afford to do this right...**

- **Must Monitor on a Calibrated external Video Monitor**
- **Hardware scopes**
- **Neutral colors behind + on screen**
- **No Sunlight**
- **D65 bulbs**

# Scopes

# Know Your Scopes

- **Luma Waveform - Luminance**
- **Vectorscope - Color Casts**



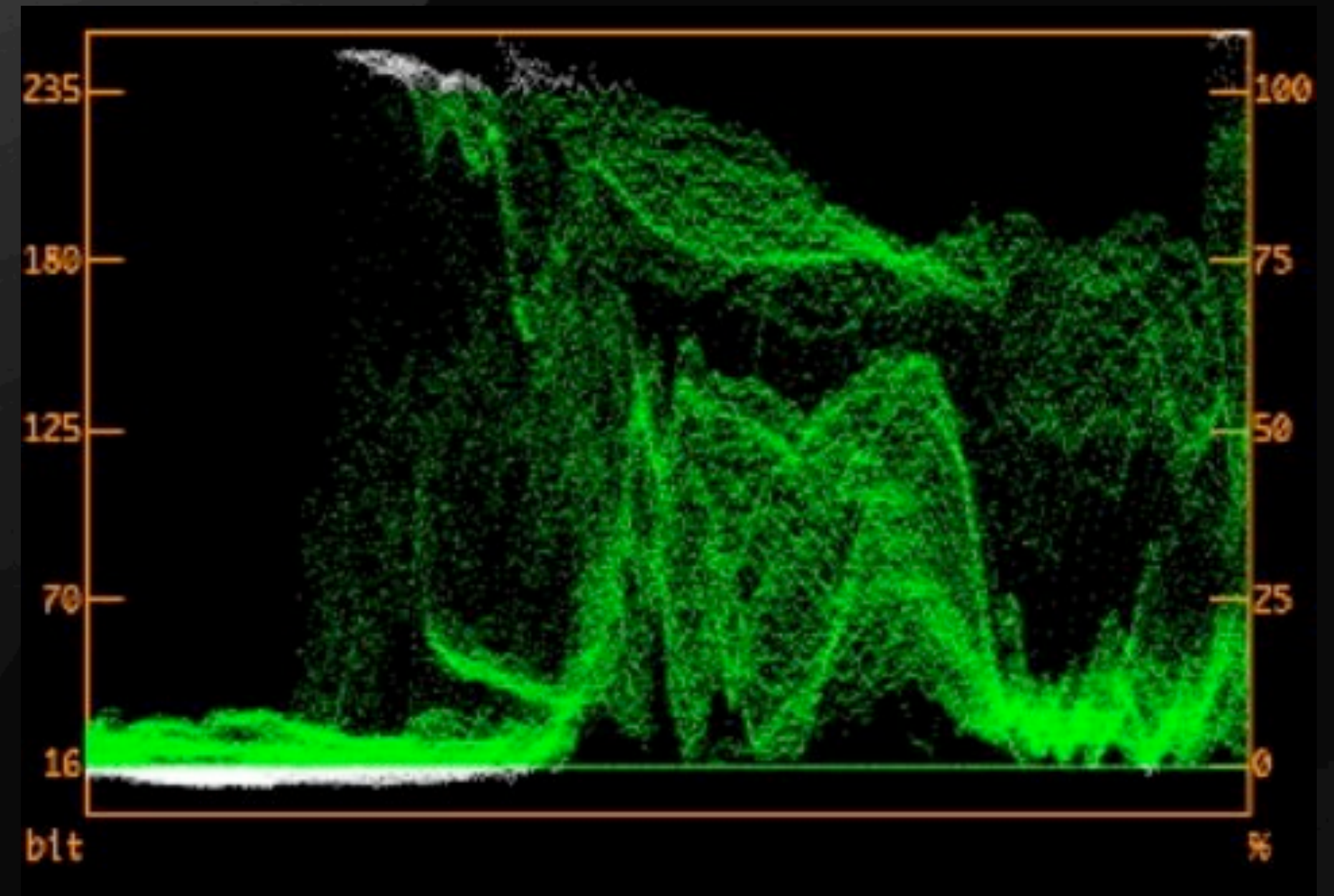
# Waveform

**Measures Luma**

**Horizontally Matches picture**

**Top= Bright**  
**Bottom = Dark**

**Trick - Divide screen into 3  
vertical sections**



# Waveform

- **Between 7.5 + 100 IRE**
- **Find things using 3rds**
- **Think vertically in percentage - normal exposure is ~ 70%**
- **Photoshop comparison 16 - 235**
- **HSL - Setup, Gamma, Gain**

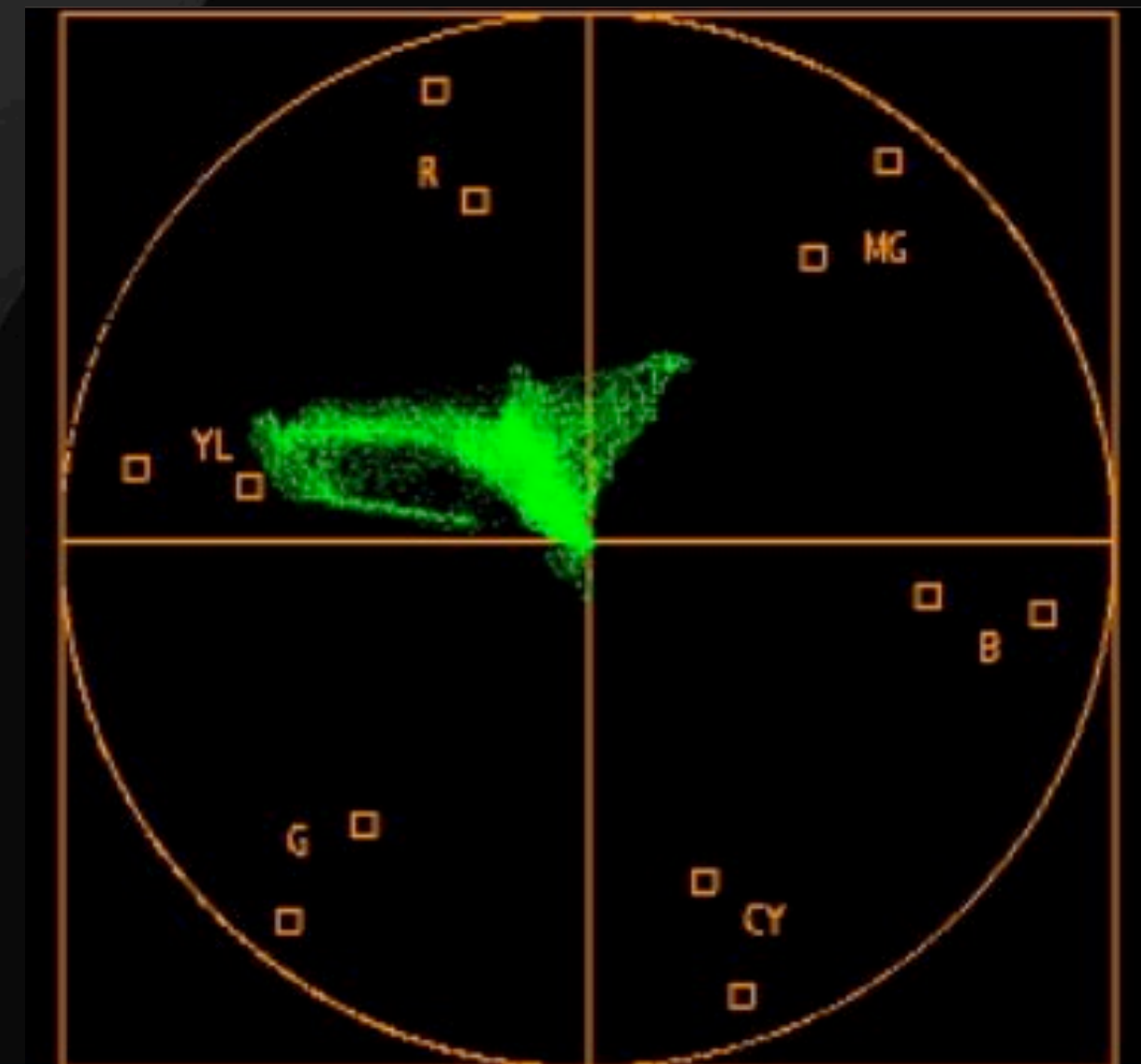


# Vectorscope

**No correspondence with the  
position of the pixels**

**“Vector” of Colors**

**Tip Draw an invisible line 1/2  
way between Yellow and Red  
= all fleshtones**





# Vectorscope

- **Vectors of Color**
- **Fleshtones very important**
- **Can use any effect with crop to help examine**
- **Hue Offset wheels**

# **Parade Scope - The scope you're not using**

# Parade

- **RGB Versions of Waveform**
- **As light goes to 255 turns white/to 0 turns black - similar**
- **Find a “neutral item”**
- **Eyedropper (as a measuring tool) can help**
- **Neutral - R,G,B ought to be similar top/bottom**
- **Fleshtones descend R to G to B**



# Controls

- **Expand Dynamic Range**
- **Neutralize Color Cast**
- **Shot to Shot Matching**
- **“Looks”**

# Controls

- **BIG BOLD MOVES**
- **Color Correction Toolset**
- **Effect happens on highest active track**
- **Alt/Opt Click control dots to reset**
- **(Shift) Up/Down in the value boxes (numbers)**
- **Control+Shift (or alt) + Mousewheel**



# HSL

# HSL - Dynamic Range

- **Only thing worthwhile on the “Controls” Tab - Saturation**
- **Setup, Gain, Gamma - In that order**
  - **Dark/Bright (dynamic range)**
  - **Gamma (set the mood)**

# HSL Neutralize

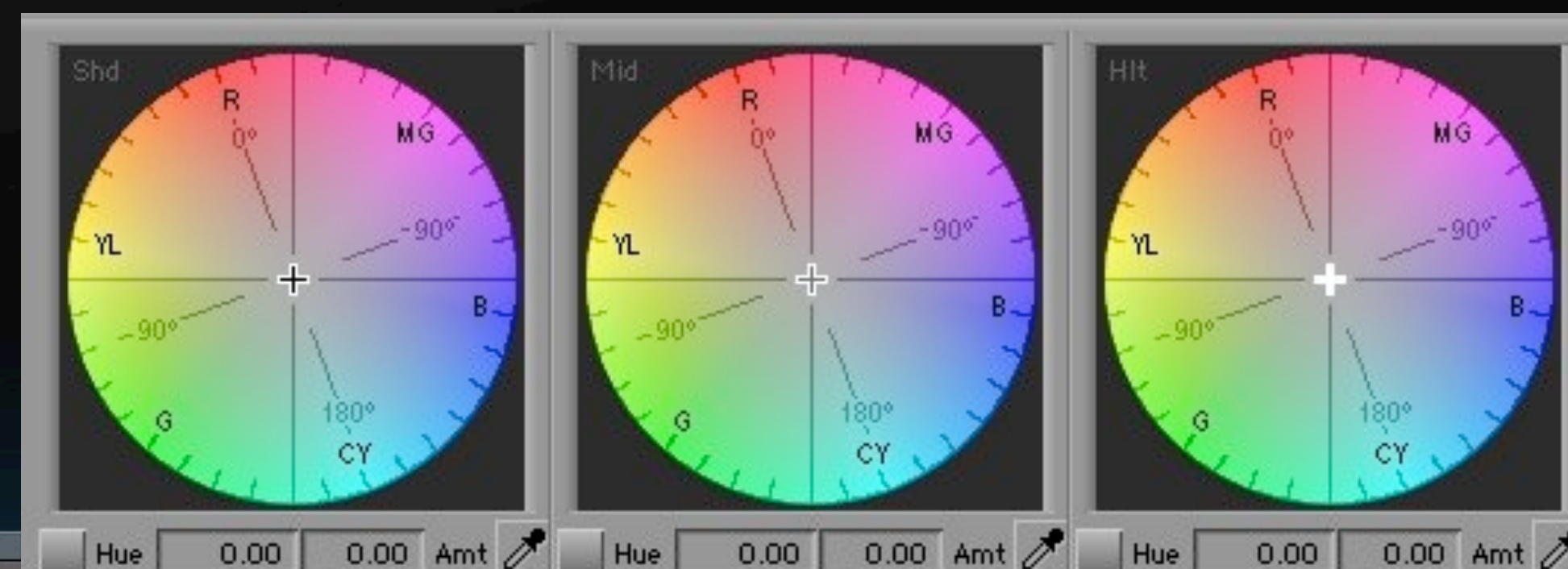
- **“Moving” the Blob - should be ‘centered’**
- **Watch for Fleshtones (where is that line?)**
- **Watch for ‘neutral’ items (grays)**
- **Midtones, Shadows, Highlights**



# **Your eyes count!**

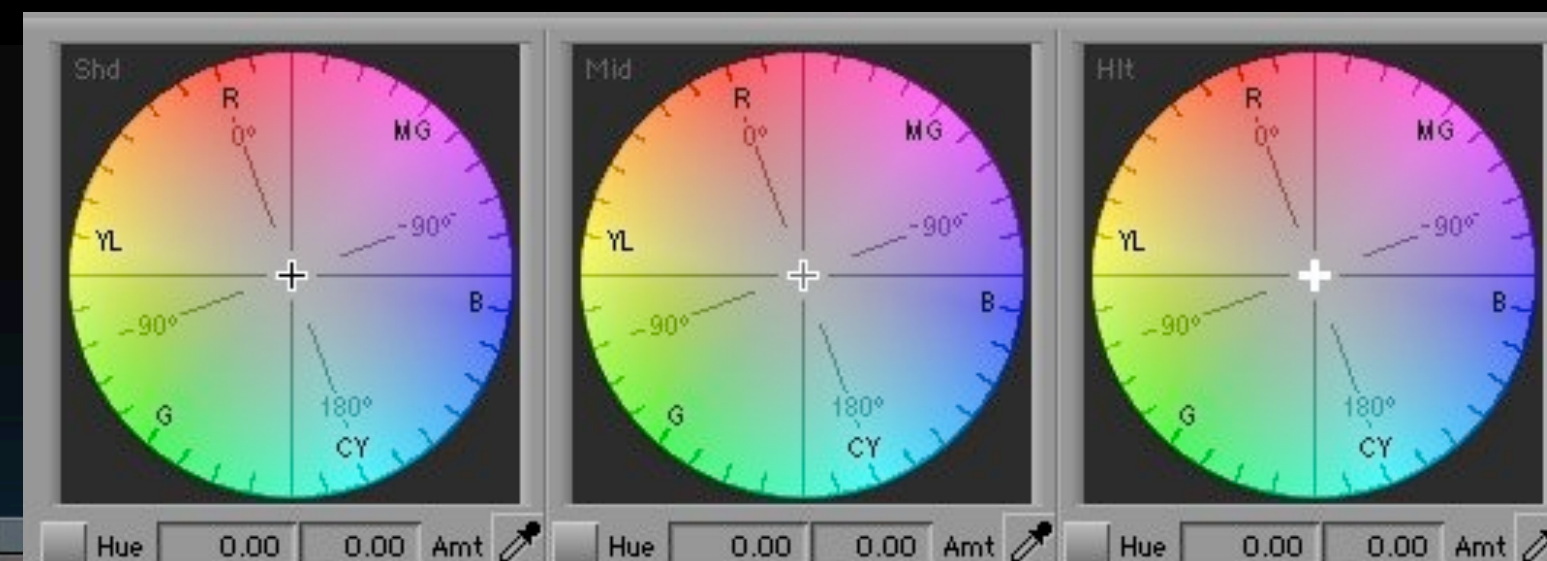
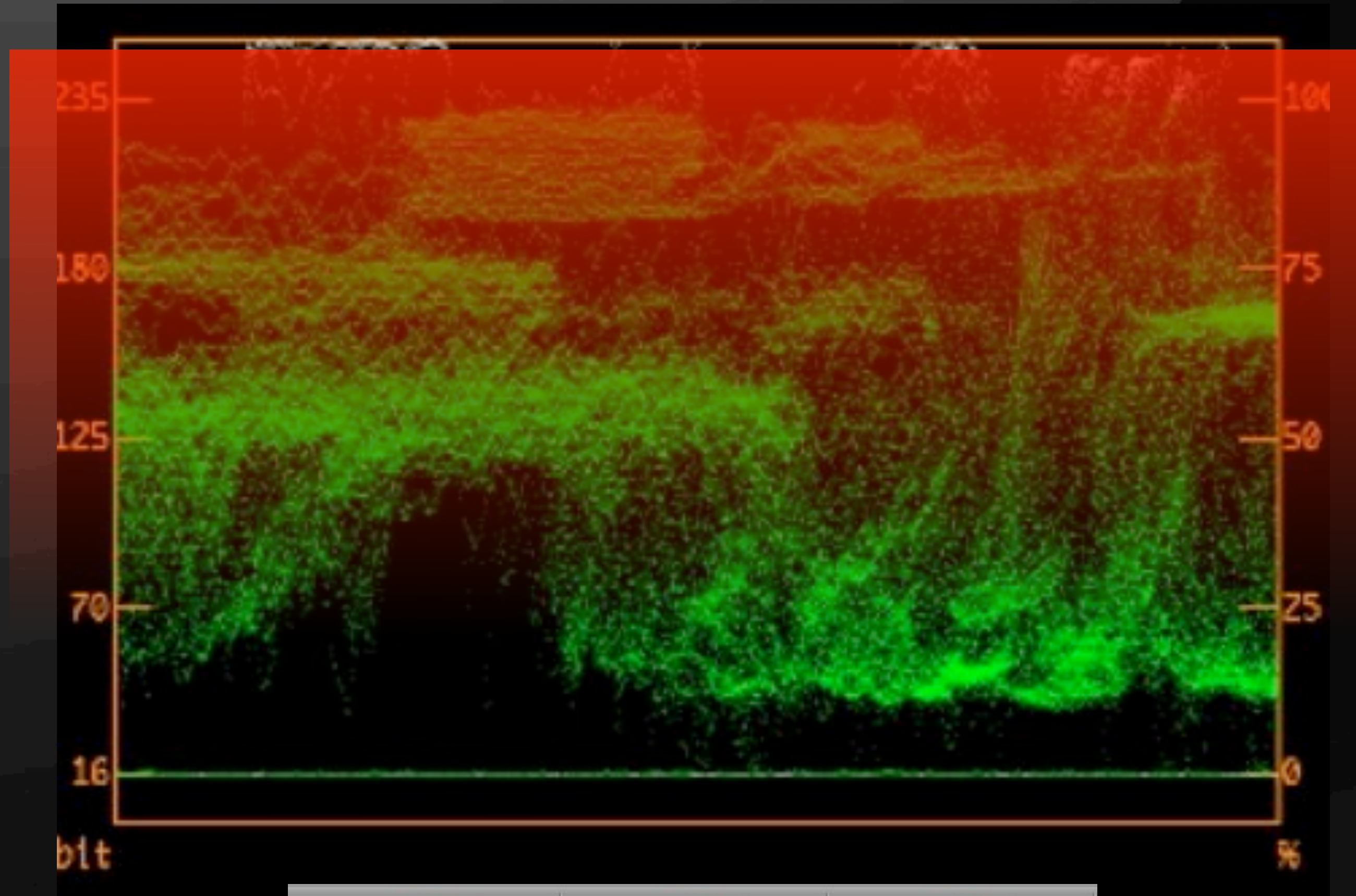
- **Dual Split**
- **Watch the Broadcast Monitor**
- **If you don't like it....it's not good.**

# Shadows, Midtones, Highlights



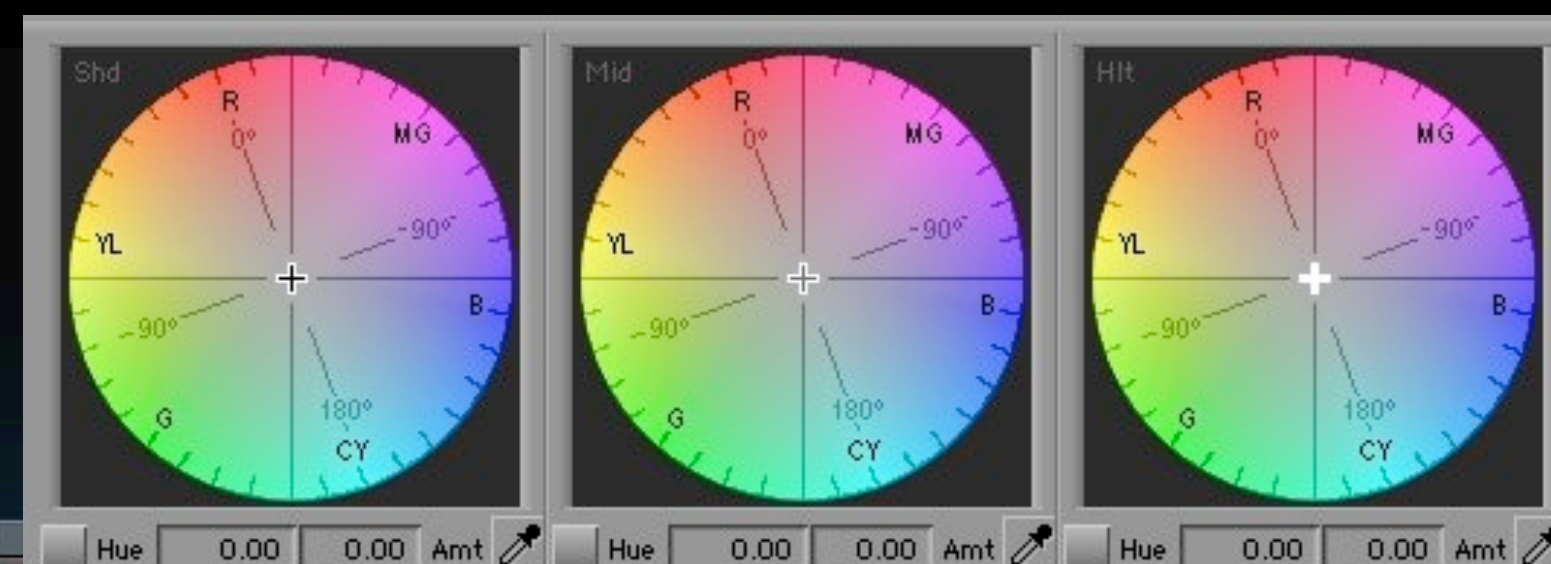
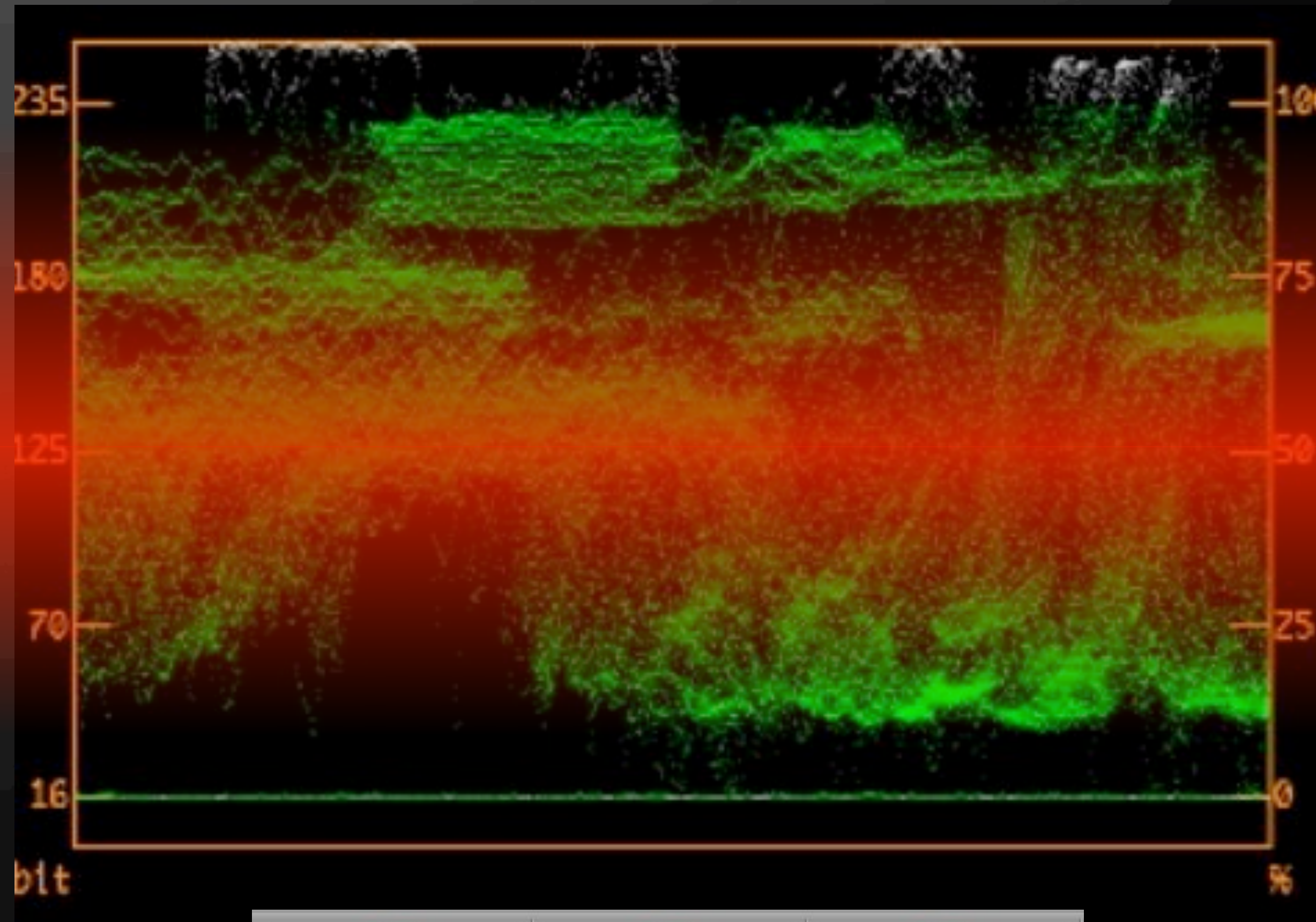


# Highlights



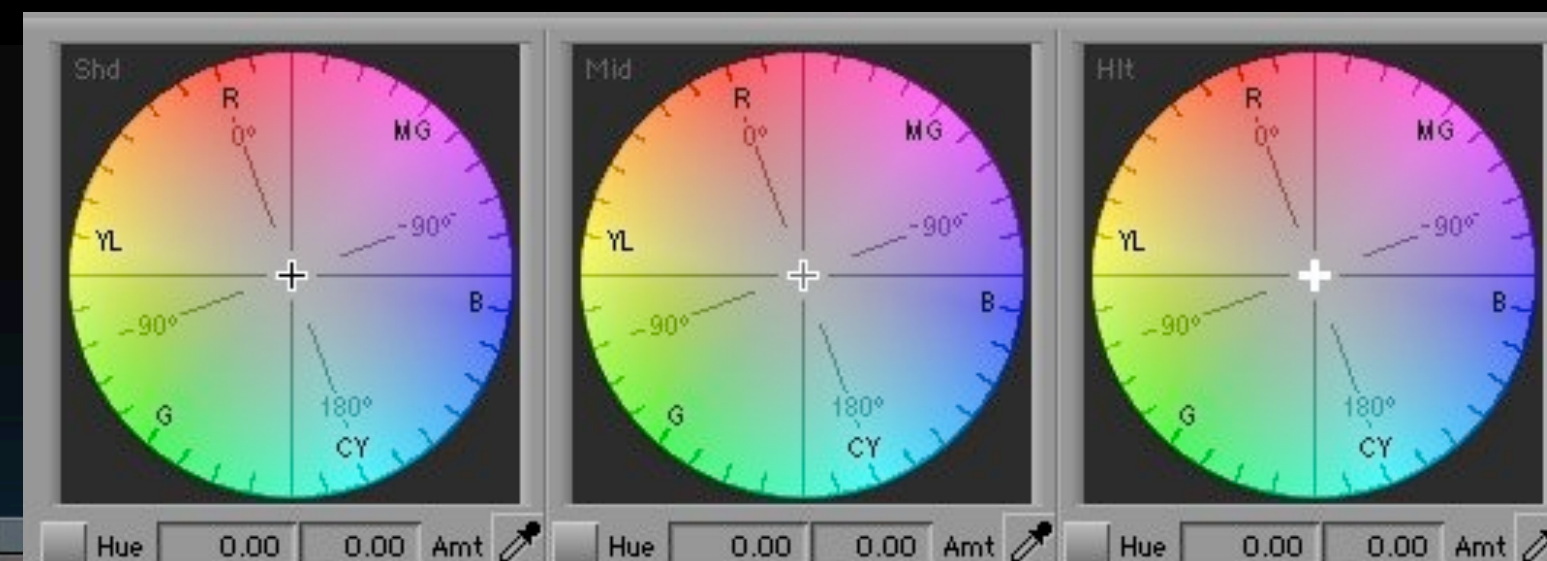
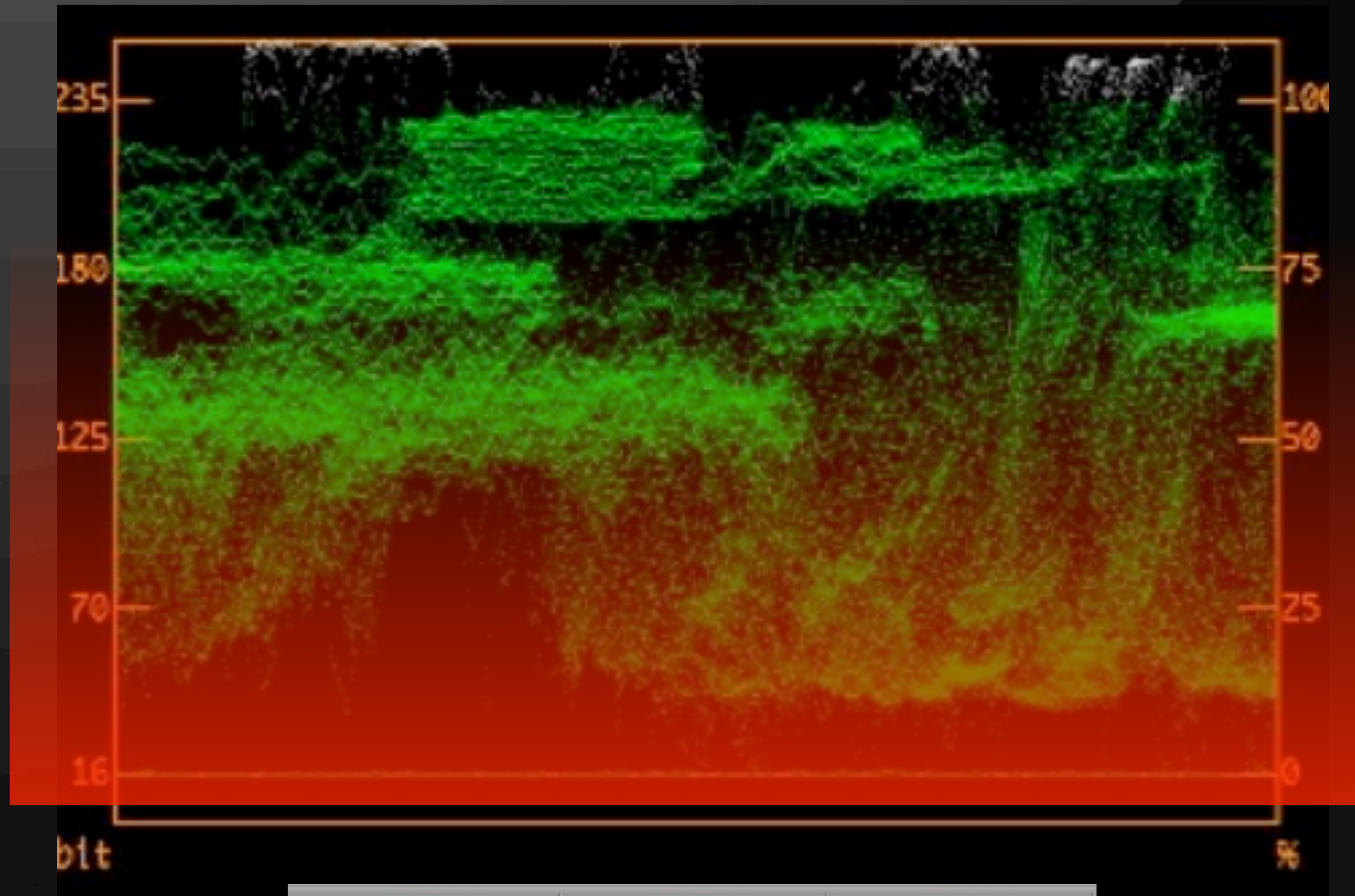


# Midtones





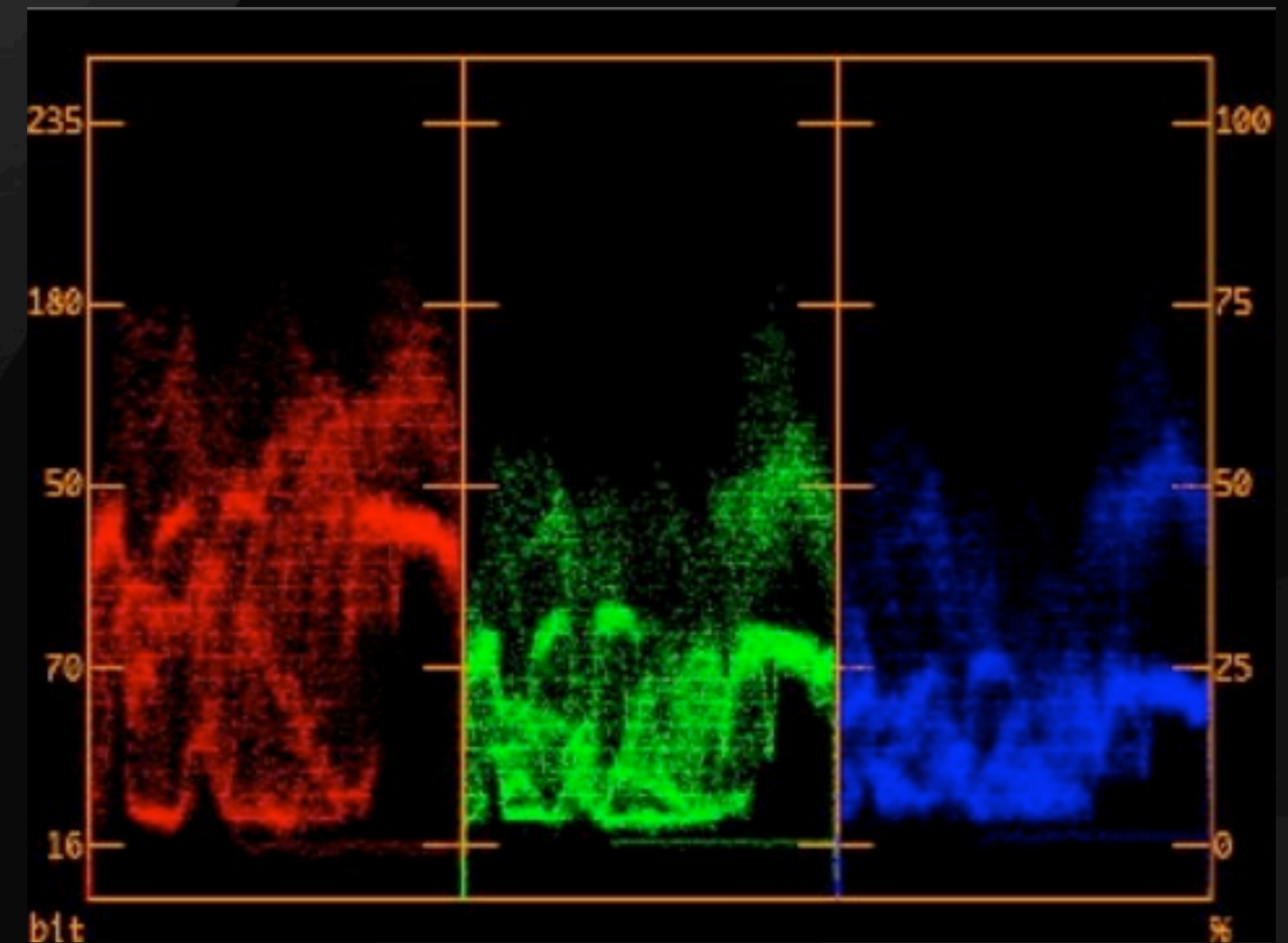
# Shadows





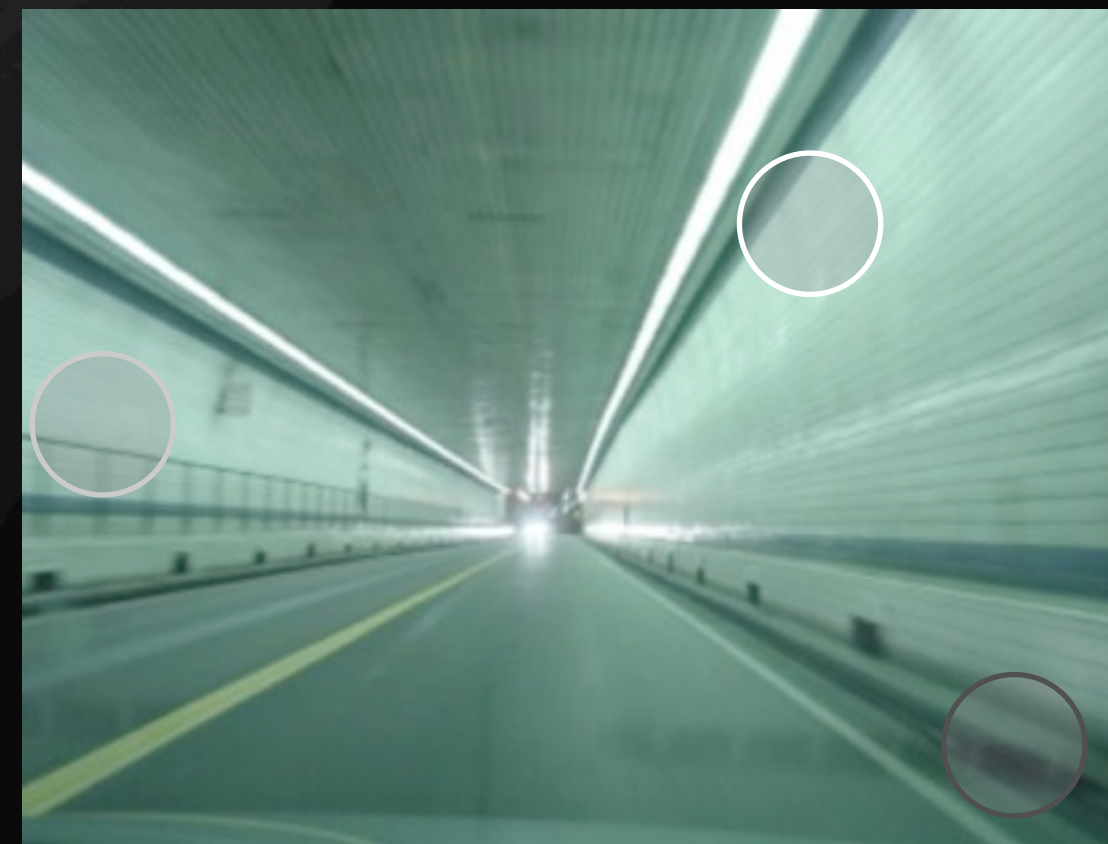
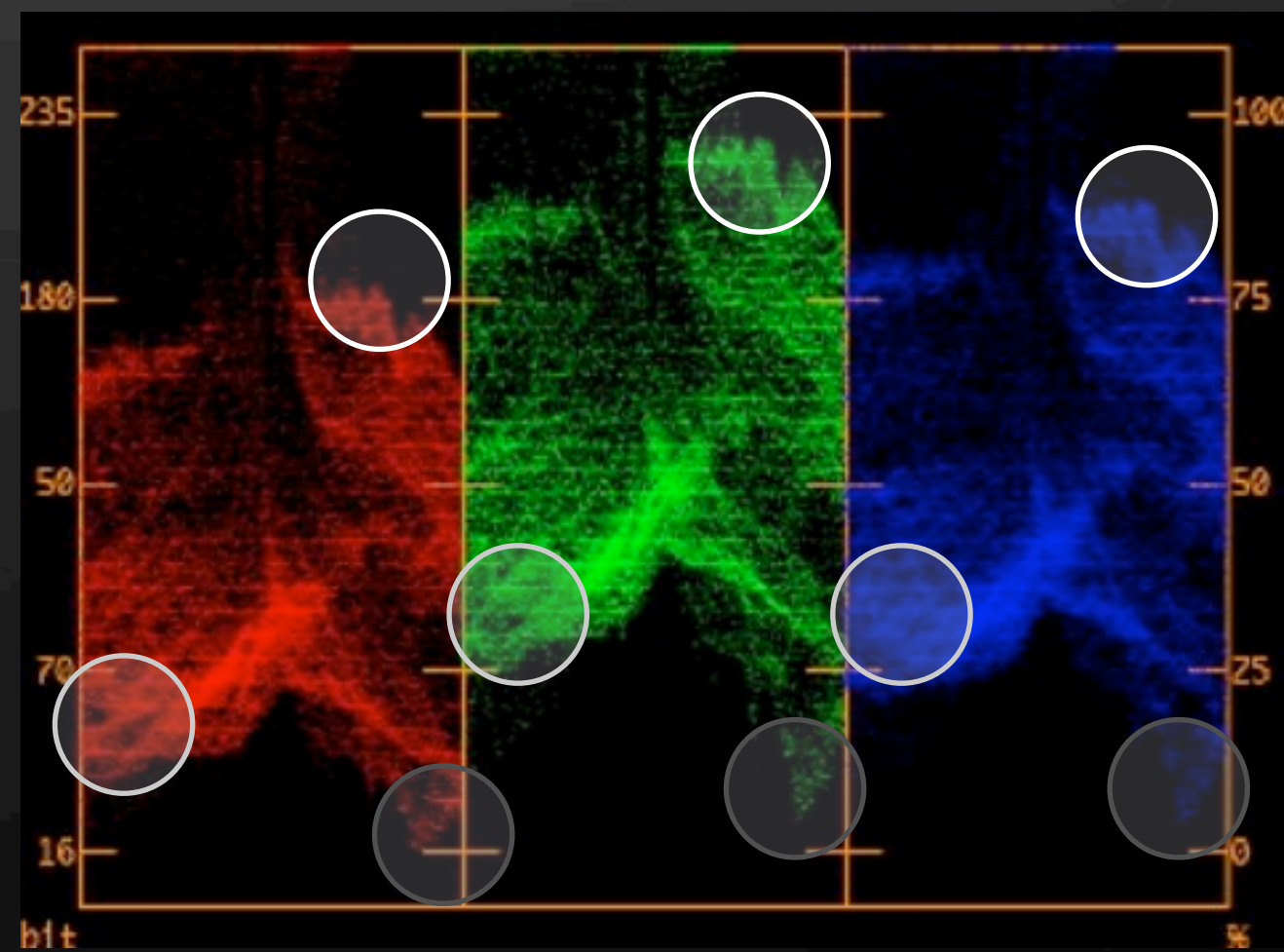
# Parade Scope

- **Like the waveform - but for each channel - R, G, B**
- **as you approach white/black the 3 channels should be similar**





# Bright, Dark and Neutral items



# HSL Review

- **Luma range - Setup (shadows), then Gain (highlight)**
- **“Mood” - Gamma (midtones)**
- **Chroma - Midtones first, then Highlights and Shadows Last**

# Curves



# Curves

- **Maps input -> Output**
- **Click to add a point/delete to remove**
- **Can type values**

# Curves II

- **Based on RGB math**
- **Brightening  $R+G+B = \text{Luma}$**
- **Do luma last here, Chroma first**
- **Great for looks + controlled ranges**

# Auto correcting



# HSL

- **Built in analyze/fix**
- **Luma first (Auto black + white)**
  - **better yet - auto contrast**
- **Auto Balance**
  - **better yet - use the eyedroppers**

# Curves

- **Just like in correction - Chroma first, then Luma**
- **Auto eyedropper - neutral item**
- **Auto Contrast**

# **Saving a correction**

- **Saving the color swatch**
- **Saving the correction**
- **Alt + Color wells to store**



# Autocolor Settings

- **HSL: Auto Contrast, then Auto Balance**
- **Curves: Auto Balance, then Auto Contrast**
- **Drag and drop - autocorrect a sequence**

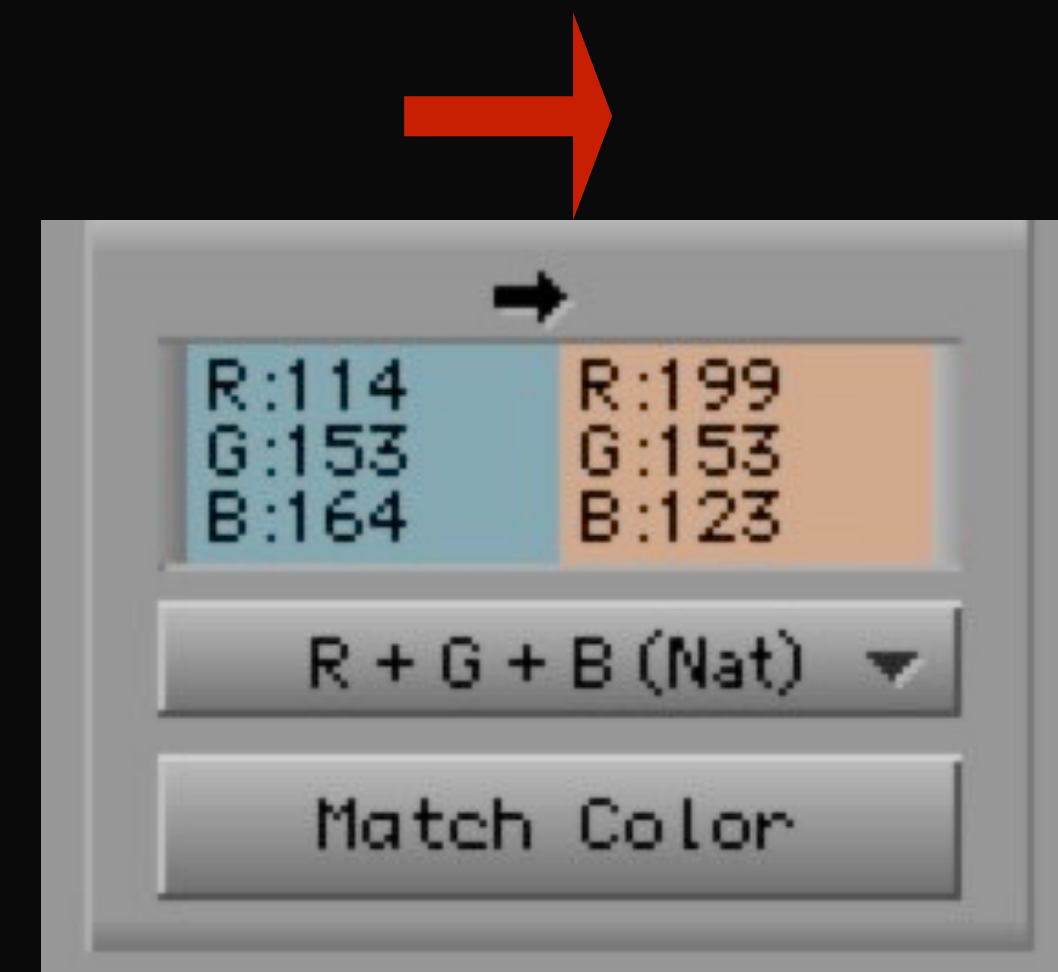
# Shot Matching

- **Expand Dynamic Range**
- **Neutralize Color Cast**
- **Shot to Shot Matching**
- **“Looks”**



# Matching

- Real Use of the eyedroppers
- Only in **Curves**
- **Natural match only**
- **PAY ATTENTION TO THE ARROW**



# Legal Video

# RGB

- **100 IRE white**
- **7.5 IRE black**
- **What are the RGB equivalents?**

	R	G	B	
				255
100	---	---	---	
	---	---	---	127
7.5	---	---	---	
				0



# RGB

- **100 IRE white**

- **7.5 IRE black**

- **235 white**

- **16 black**

R

G

B

---	---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---

255

235

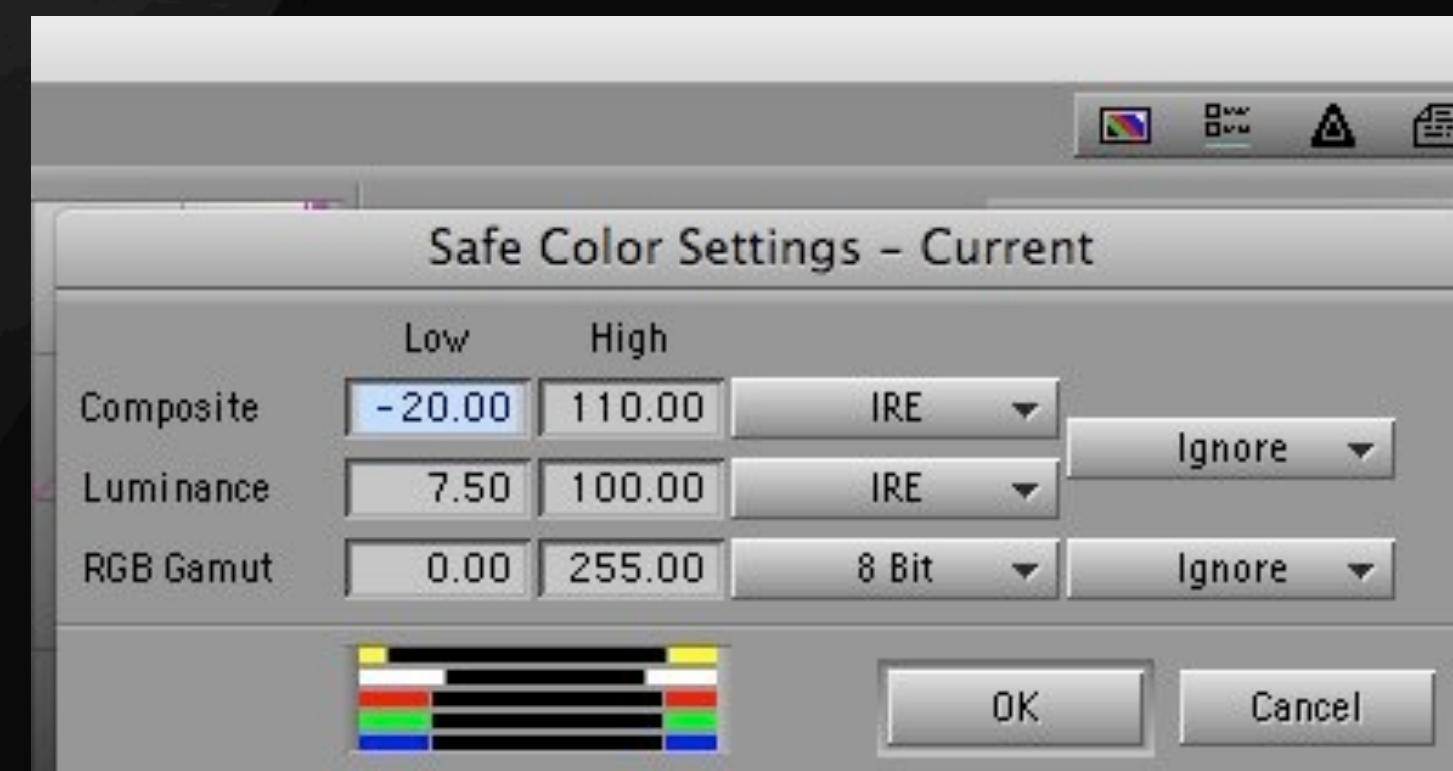
127

16

0

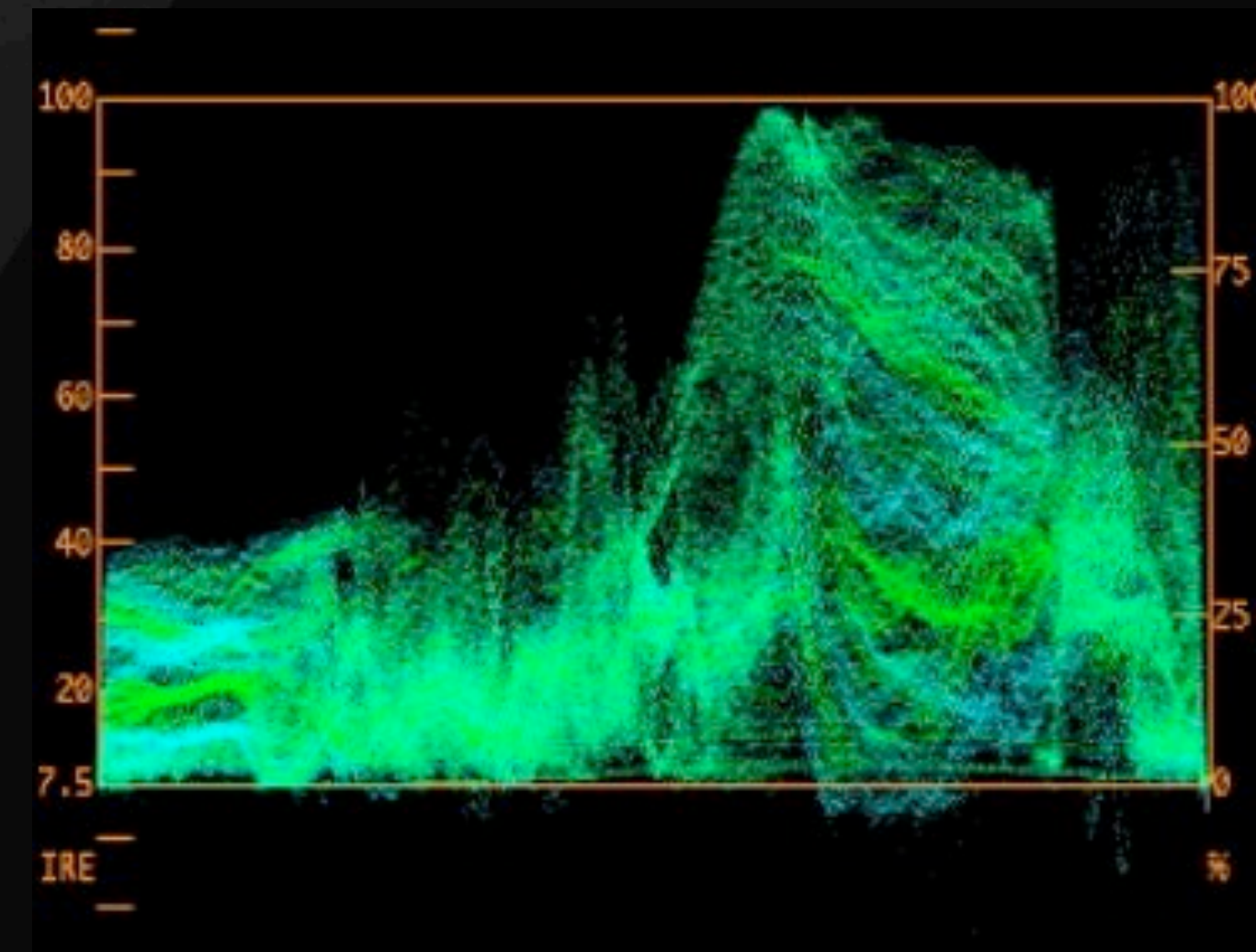
# Warning Indicators

- **Show up when there's a problem**



# YC Scope

- **Critical Scope - Shows IRE**
- **Luma PLUS chroma = brighter**
- **Must be lower than 110 IRE,**
- **Must be higher than -20**





# Secondaries

# Secondaries

- **Adjusting just part of your picture**
- **Keying**
- **Vignetting**

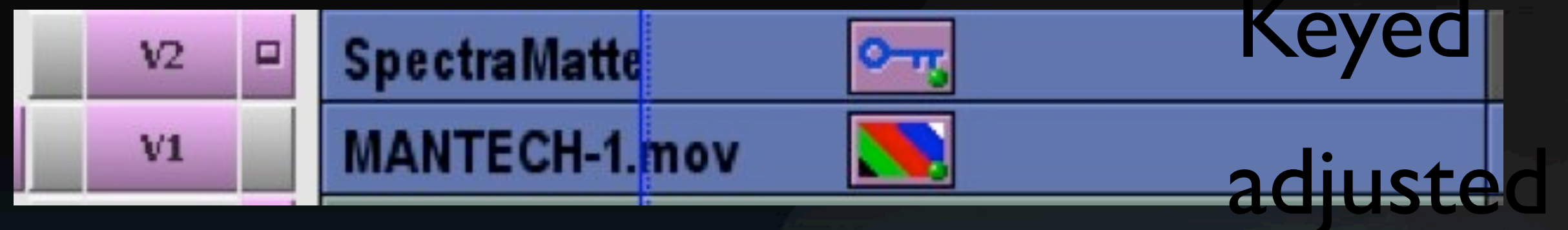
# Keying

- **Shot is stacked on top of itself**
  - **Mark Clip (T), Alt -Clipboard (alt-C)**
  - **Patch and overwrite**
- **Top clip gets cut to show other clip underneath**



# Keying

- **Same Clip**
- **Top is keyed (creates a hole)**
- **Exposes bottom corrected clip**



# Keying Mark II

- **BCC Correct Selected**
- **Select a color (it's a keyer)**
- **Adjust controls underneath**
- **Bonus: invert matt**



# Vignetting

- **Darken + Erase shape**





# Vignetting mark II

- **Save a Paint vignette**
- **Pan and scan plugin/subdivide**
- **Select & 2x click the saved paint vignette.**

# Review

- **Starts with basics/foundation (fast)**
- **Color theory/avid controls**
- **Room setup**
- **Scopes**
- **Controls**
- **Autocorrect**
- **Shot matching**
- **Secondaries**

# Closing thoughts



# Certified training?



FMCTraining.com

- **Intense 2/3 8 hour days**
- **Small classes 2-6 people**
- **Taught by professionals**
- **Authorized Adobe/Apple/Avid**
- **BRAND NEW OFFICE in IRVINE!**

# Other sessions

## Wednesday

2:15 Digital Cinema Workflows in Avid

3:45 Scriptsync/Phrasefind

## Thursday

9 Adv. Compression in Avid with Squeeze

10:30 BCC Effects in Avid

Noon FCPX Mastering Magnetic Timeline

3:45 Adv. Color Correction in MC

## Friday

9 Practical Video Compression in a Post YouTube world

11:15 Adobe Premiere Pro Expert Tips

2:15 Media Composer Expert Tips

**Jeff @ J Greenberg Consulting . Com**



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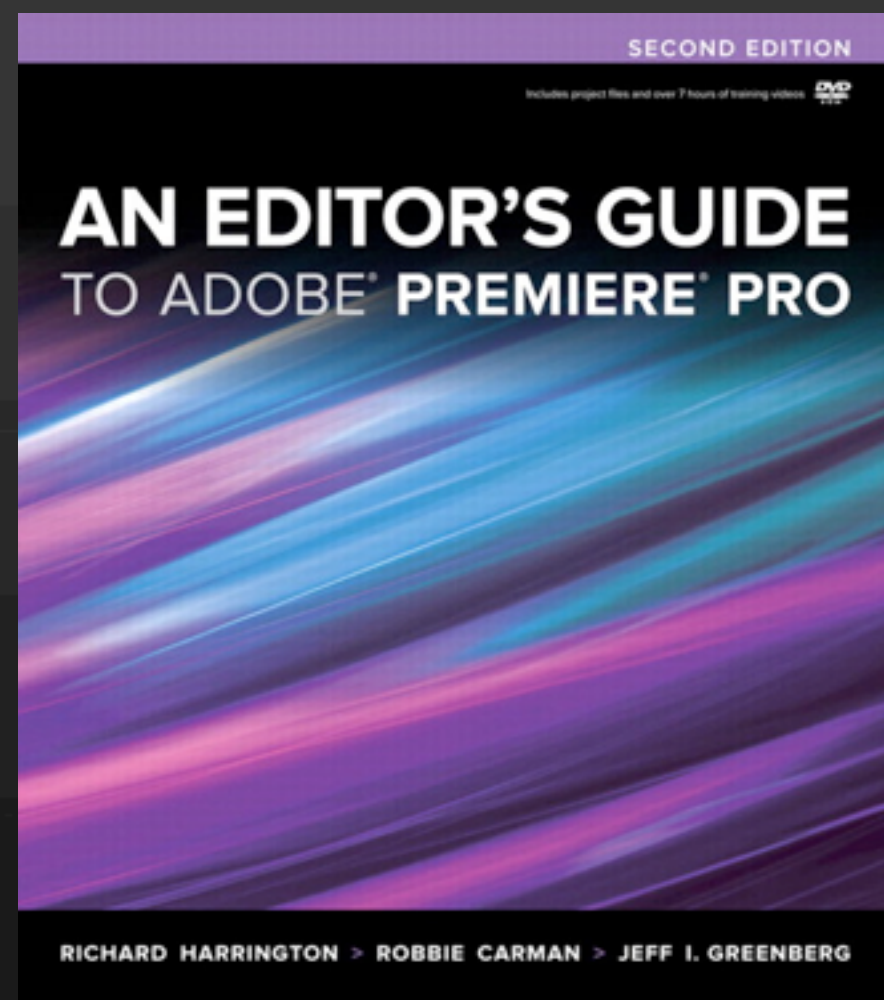
## Master Trainer



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Session Notes @ J Greenberg Consulting  
(along with my blog)

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your group directly or talk at  
your event

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